Cyanogen Bromide (CNBr) Cleavage

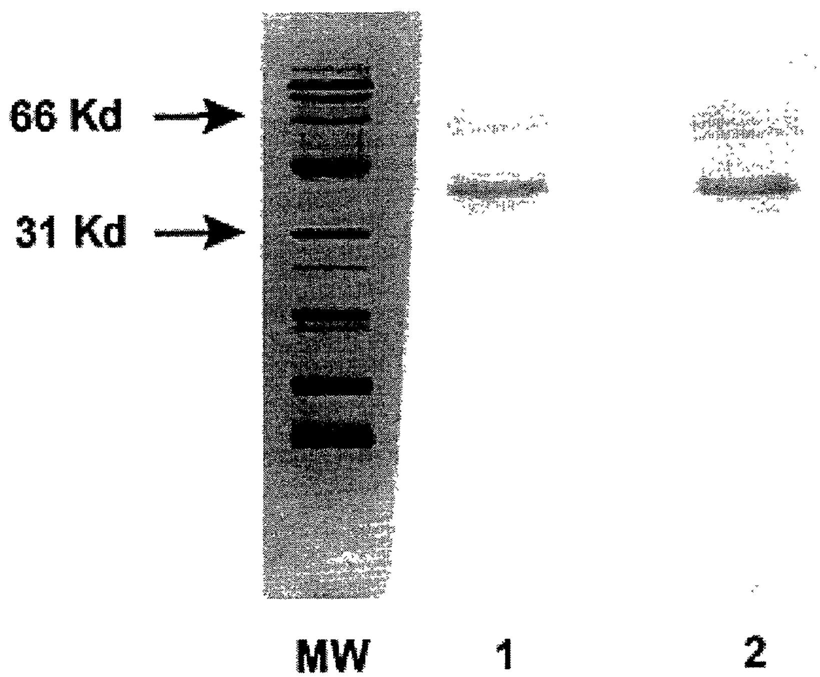


Figure 1

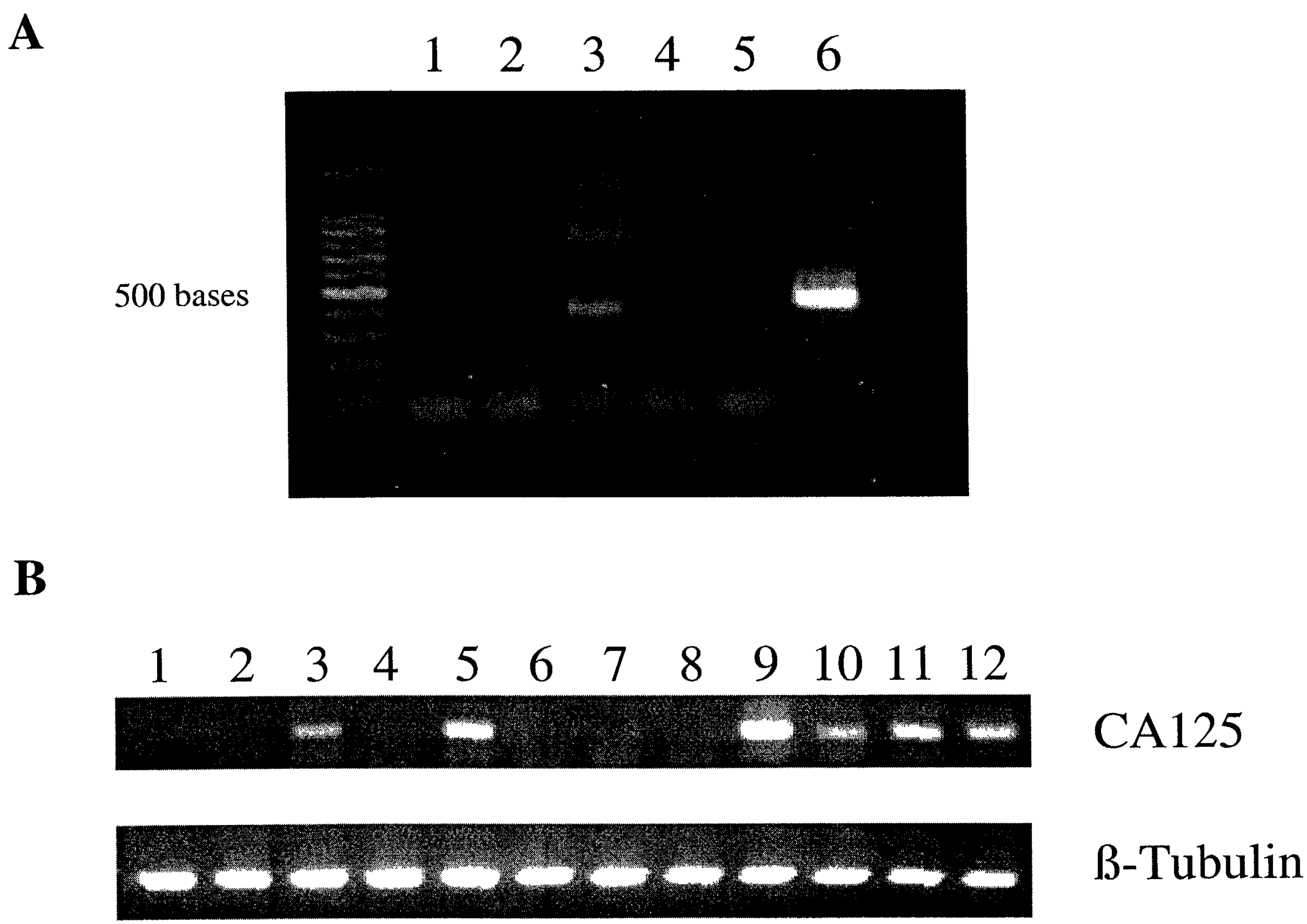
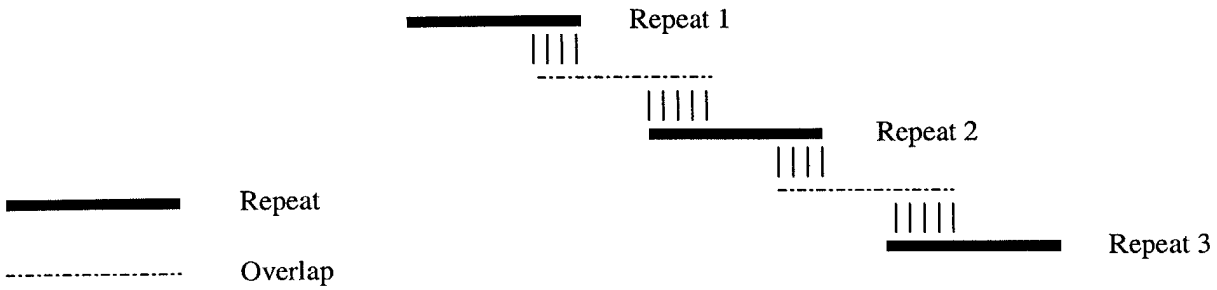


Figure 2

A Strategy for Placing Repeat Sequences in Contiguous Order Using Overlap Sequence Allignment

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(SEQ ID NO: 158)
  1 ATVPFMVPFTLNFTITNLQYEEDMRHPGSRKFNATERELQGLLKPLFRNSSLEYLYSGCRLASLRPEKDSSAMAVDAICTHRPDPEDLGLDRERLYWELSNLTNGIQELGPYTLDRNSLYVNGFTHRSSMPTTSTPGTSTVDVGTSGTPSSSPSPT   156
157 AAGPLLMPFTLNFTITNLQYEEDMRRTGSRKFNTMESVLQGLLKPLFKNTSVGPLYSGCRLTLLRPEKDGAATGVDAICTHRLDPKSPGLNREQLYWELSKLTNDIEELGPYTLDRNSLYVNGFTHQSSVSTTSTPGTSTVDLRTSGTPSSLSSPTIM 314
315 AAGPLLVPFTLNFTITNLQYGEDMGHPGSRKFNTTERVLQGLLGPIFKNTSVGPLYSGCRLTSLRSEKDGAATGVDAICIHHLDPKSPGLNRERLYWELSQLTNGIKELGPYTLDRNSLYVNGFTHRTSVPTSSTPGTSTVDLGTSGTPFSLPSPA   470
471 TAGPLLVLFTLNFTITNLKYEEDMHRPGSRKFNTTERVLQTLLGPMFKNTSVGLLYSGCRLTLLRSEKDGAATGVDAICTHRLDPKSPGLDREQLYWELSQLTNGIKELGPYTLDRNSLYVNGFTHWIPVPTSSTPGTSTVDLG.SGTPSSLPSPT   625
626 AAGPLLVPFTLNFTITNLQYEEDMHHPGSRKFNTTERVLQGLLGPMFKNTSVGLLYSGCRLTLLRSEKDGAATGVDAICTHRLDPKSPGVDREQLYWELSQLTNGIKELGPYTLDRNSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSPT   781

(SEQ ID NO: 159)
  1 SAGPLLVPFTLNFTITNLQYEEDMHHPGSRKFNTTERVLQGLLGPMFKNTSVGLLYSGCRLTLLRPEKNGAATGMDAICSHRLDPKSPGLNREQLYWELSQLTHGIKELGPYTLDRNSLYVNGFTHRSSVAPTSTPGTSTVDLGTSGTPSSLPSPT   156
157 TAVPLLVPFTLNFTITNLQYGEDMRHPGSRKFNTTERVLQGLLGPLFKNSSVGPLYSGCRLISLRSEKDGAATGVDAICTHHLNPQSPGLDREQLYWQLSQMTNGIKELGPYTLDRNSLYVNGFTHRSSGLTTSTPWTSTVDLGTSGTPSPVPSPT   312
313 TAGPLLVPFTLNFTITNLQYEEDMHRPGSRKFNATERVLQGLLSPIFKNSSVGPLYSGCRLTSLRPEKDGAATGMDAVCLYHPNPKRPGLDREQLYWELSQLTHNITELGPYSLDRDSLYVNGFTHQNSVPTTSTPGTSTVYWATTGTPSSFPGHT   468
469 EPGPLLIPFTFNFTITNLHYEENMQHPGSRKFNTTERVLQGLLKPLFKNTSVGPLYSGCRLTSLRPEKDGAATGMDAVCLYHPNPKRPGLDREQLYCELSQLTHNITELGPYSLDRDSLYVNGFTHQNSVPTTSTPGTSTVYWATTGTPSSFPGHT   624
625 EPGPLLIPFTFNFTITNLHYEENMQHPGSRKFNTTERVLQGLLKPLFKNTSVGPLYSGCRLTLLRPEKHEAATGVDTICTHRVDPIGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVNGFNPRSSVPTTSTPGTSTVHLATSGTPSSLPGHT   780

(SEQ ID NO: 160)
  1 TAGPLLVPFTLNFTITNLQYEEDMHRPGSRRFNTTERVLQGLLTPLFKNTSVGPLYSGCRLTLLRPEKQEAATGVDTICTHRVDPIGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVNGFNPWSSVPTTSTPGTSTVHLATSGTPSSLPGHT   156
157 APVPLLIPFTLNFTITDLHYEENMQHPGSRKFNTTERVLQGLLKPLFKSTSVGPLYSGCRLTLLRPEKHGAATGVDAICTLRLDPTGPGLDRERLYWELSQLTNSVTELGPYTLDRDSLYVNGFTHRSSVPTTSIPGTSAVHLETSGTPASLPGHT   312
313 APGPLLVPFTLNFTITNLQYEEDMRHPGSRKFSTTERVLQGLLKPLFKNTSVSSLYSGCRLTLLRPEKDGAATRVDAVCTHRPDPKSPGLDRERLYWKLSQLTHGITELGPYTLDRHSLYVNGFTHQSSMTTTRTPDTSTMHLATSRTPASLSGPT   468
469 TASPLLVLFTINFTITNQRYEENMHHPGSRKFNTTERVLQGLLRPVFKNTSVGPLYSGCRLTLLRPKKDGAATKVDAICTYRPDPKSPGLDREQLYWELSQLTHSITELGPYTQDRDSLYVNGFTHRSSVPTTSIPGTSAVHLETSGTPASLPGHT   624

(SEQ ID NO: 161)
  1 ATGPVLLPFTLNFTITNLQYEEDMHRPGSRKFNTTERVLQGLLMPLFKNTSVSSLYSGCRLTLLRPEKDGAATRVDAVCTHRPDPKSPGLDRERLYWKLSQLTHGITELGPYTLDRHSLYVNGFTHQSSMTTTRTPDTSTMHLATSRTPASLSGPT   156
157 TASPLLVLFTINFTITNLRYEENMHHPGSRKFNTTERVLQGLLRPVFKNTSVGPLYSGCRLTLLRPKKDGAATKVDAICTYRPDPKSPGLDREQLYWELSQLTHSITELGPYTQDRDSLYNVGFTQRSSVPTTSVPGTPTVDLGTSGTPVSKPGPS   312
313 AASPLLVLFTLNGTITNLRYEENMQHPGSRKFNTTERVLQGLLRSLFKSTSVGPLYSGCRLTLLRPEKDGTATGVDAICTHHPDPKSPRLDREQLYWELSQLTHNITELGHYALDNDSLFVNGFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPS   468
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Figure 3 (SEQ ID NOS: 158, 159, 160, and 161)

TARGET 0E259660

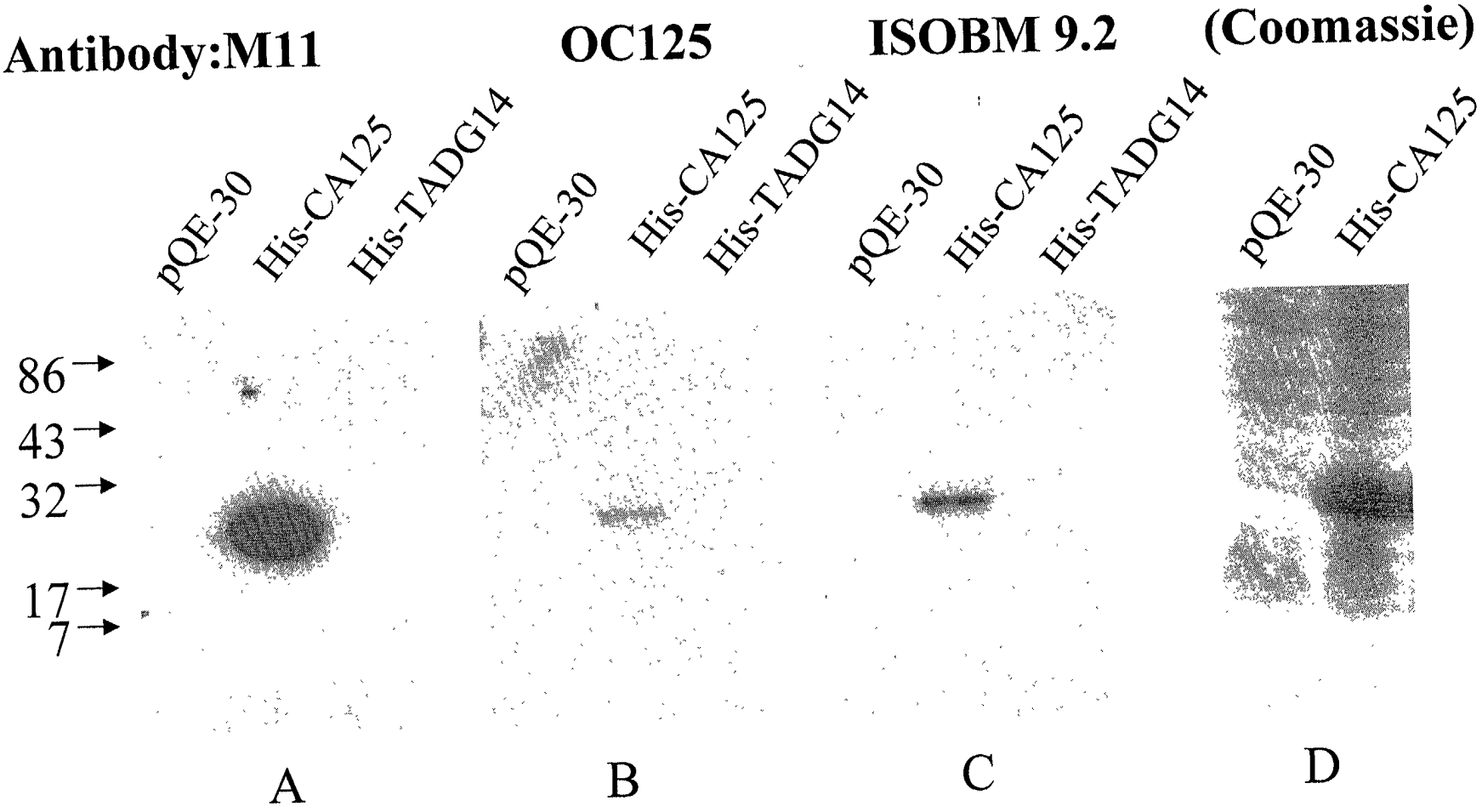
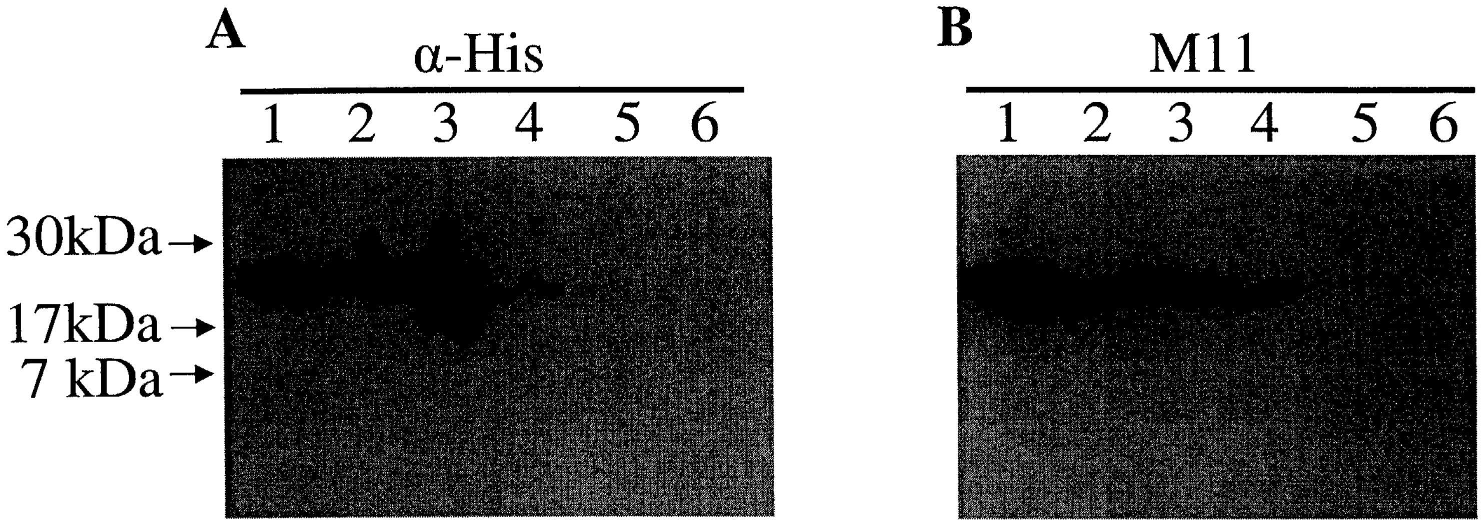


Figure 4



C

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                 X                                       X                   X
1    EPGPLLIPFT FNFTITNLHY EENMQHPGSR KFNTTERVLQ GLLKPLFKNT
             C-                     -C
51   SVGPLYSGCR LTLLRPEKHE AATGVDTICT HRVDPIGPGL DRERLYWELS
                                     OO   OOOO    O        OO O  O
101  QLTNSITELG PYTLDRDSLY VNGFNPRSSV PTTSTPGTST VHLATSGTPS
     O    O
151  SLPKLT
```

Figure 5 (SEQ ID NO: 150)

09965738.120401

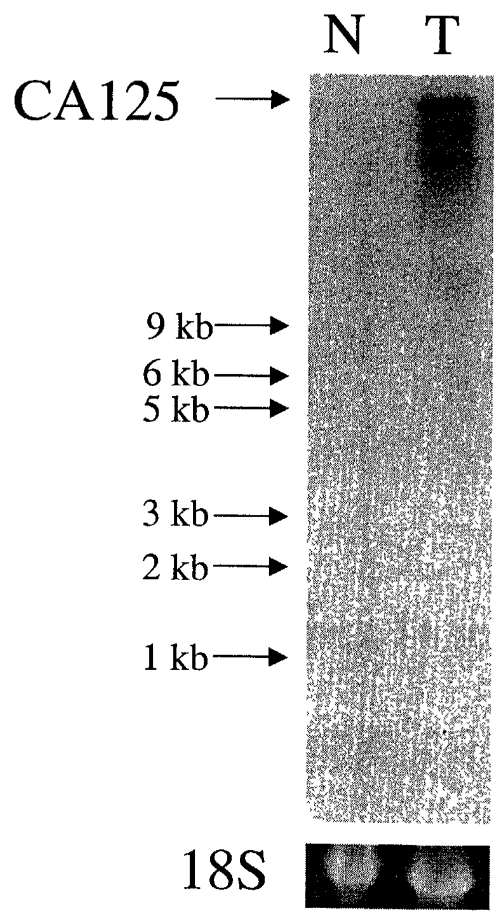

Figure 6

TARGET 9625663

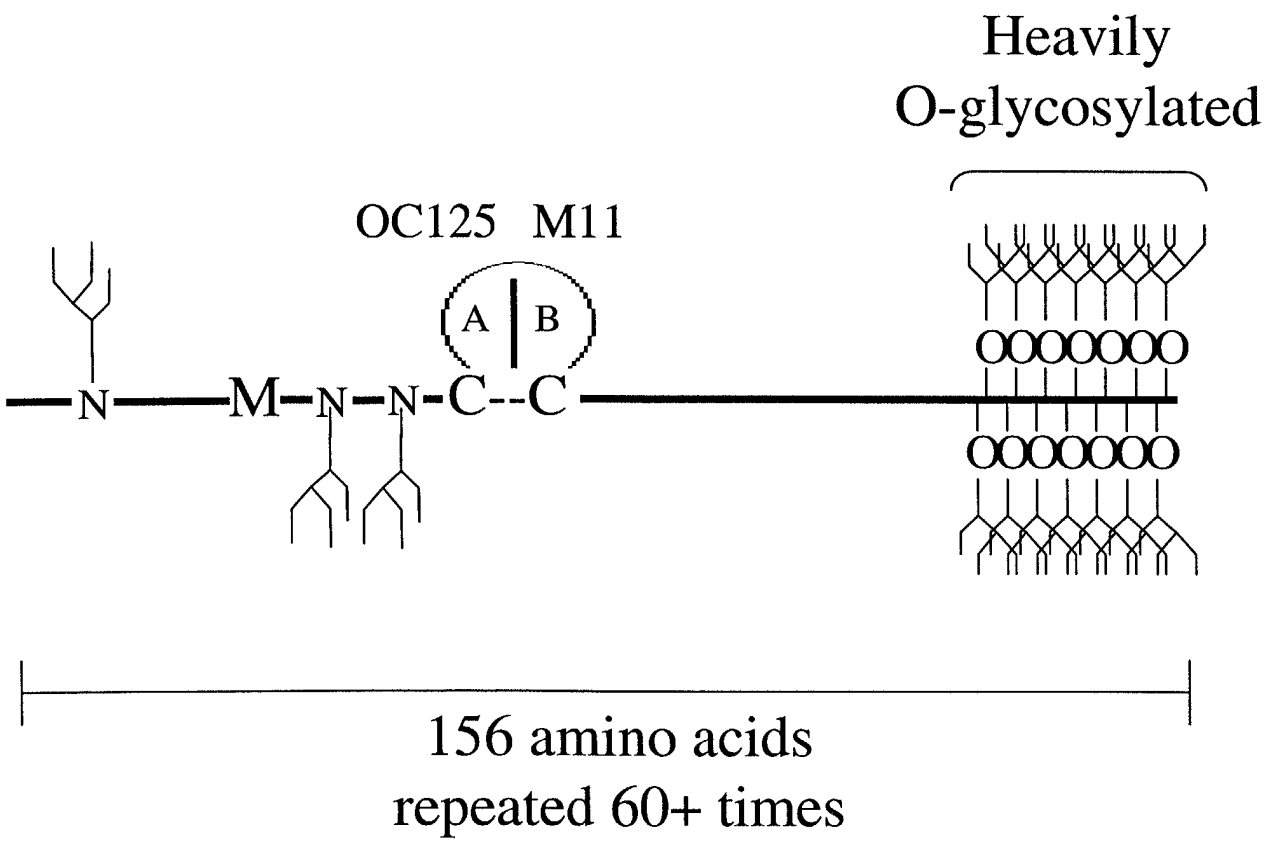

Figure 7A

Figure 7B (SEQ ID NO: 163)

Exon 1

1 42

ATVPFMVPFTLNFTITNLQYEEDMRHPGSRKFNATERELQGL (SEQ ID NO: 164)

TAVPLLVPFTLNFTITNLQYGEDMRHPGSRKFNTTERVLQGL (SEQ ID NO: 165)

VPGPLLVPFTLNFTITNLQYEEAMRHPGSRKFNTTERVLQGL (SEQ ID NO: 166)

APGPLLVPFTLNFTITNLQYEEDMRHPGSRKFSTTERVLQGL (SEQ ID NO: 167)

APGPLLVPFTLNFTITNLQYEEDMRHPGSRKFNTTERVLQGL (SEQ ID NO: 168)

APGPLLVPFTLNFTITNLQYEVDMRHPGSRKFNTTERVLQGL (SEQ ID NO: 169)

SAGPLLVPFTLNFTITNLQYEEDMRHPGSRKFNTTERVLQGL (SEQ ID NO: 170)

AAGPLLMPFTLNFTITNLQYEEDMRRTGSRKFNTMESVLQGL (SEQ ID NO: 171)

TASPLLVLFTINCTITNLQYEEDMRRTGSRKFNTMESVLQGL (SEQ ID NO: 172)

AAGPLLVPFTLNFTITNLQYGEDMGHPGSRKFNTTERVLQGL (SEQ ID NO: 173)

TAGPLLIPFTLNFTITNLQYGEDMGHPGSRKFNTTERVLQGL (SEQ ID NO: 174)

TAGPLLVPFTLNFTITNLQYGEDMGHPGSRKFNTTERVLQGL (SEQ ID NO: 175)

TAGPLLVLFTLNFTITNLKYEEDMHRPGSRKFNTTERVLQTL (SEQ ID NO: 176)

TAGPLLVPFTLNFTITNLQYEEDMHRPGSRKFNATERVLQGL (SEQ ID NO: 177)

TAGPLLVPFTLNFTITNLQYEEDMHRPGSRRFNTTERVLQGL (SEQ ID NO: 178)

TAGPLLVPFTLNFTITNLQYEEDMHRPGSRKFNTTERVLQGL (SEQ ID NO: 179)

APVPLLIPFTLNFTITNLQYEEDMHRPGSRKFNTTERVLQGL (SEQ ID NO: 180)

ATGPVLLPFTLNFTITNLQYEEDMHRPGSRKFNTTERVLQGL (SEQ ID NO: 181)

AAGPLLVPFTLNFTITNLQYEEDMHHPGSRKFNTTERVLQGL (SEQ ID NO: 182)

SAGPLLVPFTLNFTITNLQYEEDMHHPGSRKFNTTERVLQGL (SEQ ID NO: 183)

TASPLLVLFTINFTITNQRYEENMHHPGSRKFNTTERVLQGL (SEQ ID NO: 184)

TASPLLVLFTINFTITNLRYEENMHHPGSRKFNTTERVLQGL (SEQ ID NO: 185)

EPGPLLIPFTFNFTITNLHYEENMQHPGSRKFNTTERVLQGL (SEQ ID NO: 186)

EPGPLLIPFTFNFTITNLRYEENMQHPGSRKFNTTERVLQGL (SEQ ID NO: 187)

APVPLLIPFTLNFTITNLHYEENMQHPGSRKFNTTERVLQGL (SEQ ID NO: 188)

APVPLLIPFTLNFTITDLHYEENMQHPGSRKFNTTERVLQGL (SEQ ID NO: 189)

AASPLLVLFTLNGTITNLRYEENMQHPGSRKFNTTERVLQGL (SEQ ID NO: 190)

TAGPLLVPFTLNFTITNLKYEEDMHCPGSRKFNTTERVLQSL (SEQ ID NO: 191)

AASHLLILFTLNFTITNLRYEENMW.PGSRKFNTTERVLQGL (SEQ ID NO: 192)

TGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHL (SEQ ID NO: 193)

AMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLL (SEQ ID NO: 194)

Figure 7C

Exon 2

43 65

LKPLFRNSSLEYLYSGCRLASLR (SEQ ID NO: 195)
LKPLFKNTSVSSLYSGCRLTLLR (SEQ ID NO: 196)
LKPLFKNTSVGPLYSGCRLTLLR (SEQ ID NO: 197)
LKPLFKSTSVGPLYSGCRLTLLR (SEQ ID NO: 198)
LKPLFKSTSVGPLYSSCRLTLLR (SEQ ID NO: 199)
LKPLFKNTSVGPLYSGCRLTSLR (SEQ ID NO: 200)
LGPIFKNTSVGPLYSGCRLTSLR (SEQ ID NO: 201)
LGPMFKNTSVGLLYSGCRLTLLR (SEQ ID NO: 202)
LGPMFKNTSVGPLYSGCRLTLLR (SEQ ID NO: 203)
LGPMFKNTSVGPLYSGCRLTSLR (SEQ ID NO: 204)
LGPLFKNSSVGPLYSGCRLISLR (SEQ ID NO: 205)
LGPLFKNSSVDPLYSGCRLTSLR (SEQ ID NO: 206)
LSPIFKNSSVGPLYSGCRLTSLR (SEQ ID NO: 207)
LSPIFKNTSVGPLYSGCRLTLLR (SEQ ID NO: 208)
LSPLFQRSSLGARYTGCRVIALR (SEQ ID NO: 209)
LRPLFKNTSVSSLYSGCRLTLLR (SEQ ID NO: 210)
LRPLFKNTSVGPLYSGSRLTLLR (SEQ ID NO: 211)
LRPLFKNTSIGPLYSSCRLTLLR (SEQ ID NO: 212)
LRPLFKSTSVGPLYSGCRLTLLR (SEQ ID NO: 213)
LRPVFKNTSVGLLYSGCRLTLLR (SEQ ID NO: 214)
LRPVFKNTSVGPLYSGCRLTLLR (SEQ ID NO: 215)
LRSLFKSTSVGPLYSGCRLTLLR (SEQ ID NO: 216)
LRSLFKSTSVGPLYSGCRLTSLR (SEQ ID NO: 217)
LTPLFKNTSVGPLYSGCRLTLLR (SEQ ID NO: 218)
LTPLFRNTSVSSLYSGCRLTLLR (SEQ ID NO: 219)
LMPLFKNTSVSSLYSGCRLTLLR (SEQ ID NO: 220)
RPLFQKSSM.GPFYLGCQLISLR (SEQ ID NO: 221)

Figure 7C

Exon 3

66 123

PEKDSSAMAVDAICTHRPDPEDLGLDRERLYWELSNLTNGIQELGPYTLDRNSLYVNG (SEQ ID NO: 222)

PEKDGAATGVDAICTHRLDPKSPGLNREQLYWELSKLTNDIEELGPYTLDRNSLYVNG (SEQ ID NO: 223)

PKKDGAATGVDAICTHRLDPKSPGLNREQLYWELSKLTNDIEELGPYTLDRNSLYVNG (SEQ ID NO: 224)

PEKDGTATGVDAICTHHPDPKSPRLDREQLYWELSQLTHNITELGHYALDNDSLFVNG (SEQ ID NO: 225)

PEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNG (SEQ ID NO: 226)

PEKDGAATGMDAVCLYHPNPKRPGLDREQLYWELSQLTHNITELGPYSLDRDSLYVNG (SEQ ID NO: 227)

PEKDGAATGMDAVCLYHPNPKRPGLDREQLYCELSQLTHNITELGPYSLDRDSLYVNG (SEQ ID NO: 228)

PEKDGAATRVDAACTYRPDPKSPGLDREQLYWELSQLTHSITELGPYTLDRVSLYVNG (SEQ ID NO: 229)

PKKDGAATKVDAICTYRPDPKSPGLDREQLYWELSQLTHSITELGPYTQDRDSLYVNG (SEQ ID NO: 230)

PKKDGAATKVDAICTYRPDPKSPGLDREQLYWELSQLTHSITELGPYTQDRDSLYNVG (SEQ ID NO: 231)

PEKDGAATRVDAVCTHRPDPKSPGLDRERLYWKLSQLTHGITELGPYTLDRHSLYVNG (SEQ ID NO: 232)

PEKDGVATRVDAICTHRPDPKIPGLDRQQLYWELSQLTHSITELGPYTLDRDSLYVNG (SEQ ID NO: 233)

SEKDGAATGVDAICIHHLDPKSPGLNRERLYWELSQLTNGIKELGPYTLDRNSLYVNG (SEQ ID NO: 234)

SEKDGAATGVDAICTHRLDPKSPGLDREQLYWELSQLTNGIKELGPYTLDRNSLYVNG (SEQ ID NO: 235)

SEKDGAATGVDAICTHRLDPKSPGVDREQLYWELSQLTNGIKELGPYTLDRNSLYVNG (SEQ ID NO: 236)

SEKDGAATGVDAICTHRVDPKSPGVDREQLYWELSQLTNGIKELGPYTLDRNSLYVNG (SEQ ID NO: 237)

SEKDGAATGVDAICTHHLNPQSPGLDREQLYWQLSQMTNGIKELGPYTLDRNSLYVNG (SEQ ID NO: 238)

PEKRGAATGVDTICTHRLDPLNPGLDREQLYWELSKLTRGIIELGPYLLDRGSLYVNG (SEQ ID NO: 239)

PEKNGAATGMDAICSHRLDPKSPGLNREQLYWELSQLTHGIKELGPYTLDRNSLYVNG (SEQ ID NO: 240)

PEKNGAATGMDAICSHRLDPKSPGLDREQLYWELSQLTHGIKELGPYTLDRNSLYVNG (SEQ ID NO: 241)

PEKHGAATGVDAICTLRLDPTGPGLDRERLYWELSQLTNSVTELGPYTLDRDSLYVNG (SEQ ID NO: 242)

PEKHGAATGVDAICTLRLDPTGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVNG (SEQ ID NO: 243)

PEKHEAATGVDTICTHRVDPIGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVNG (SEQ ID NO: 244)

PEKQEAATGVDTICTHRVDPIGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVNG (SEQ ID NO: 245)

PEKQEAATGVDTICTHRVDPIGPGLDRERLYWELSQLTNSITELGPYTLDRDSLYVDG (SEQ ID NO: 246)

PEKDKAATRVDAICTHHPDPQSPGLNREQLYWELSQLTHGITELGPYTLDRDSLYVDG (SEQ ID NO: 247)

SVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNG (SEQ ID NO: 248)

PEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFING (SEQ ID NO: 249)

Figure 7C

Exon 4

124 135

FTHRSSMPTTST (SEQ ID NO: 250)
FTHRSSMPTTSI (SEQ ID NO: 251)
FTHRTSVPTSST (SEQ ID NO: 252)
FTHRTSVPTTST (SEQ ID NO: 253)
FTHRSSVPTTSS (SEQ ID NO: 254)
FTHRSSVSTTST (SEQ ID NO: 255)
FTHRSSVAPTST (SEQ ID NO: 256)
FTHRSSGLTTST (SEQ ID NO: 257)
FTHRSFGLTTST (SEQ ID NO: 258)
FTHRSSFLTTST (SEQ ID NO: 259)
FTHRNFVPITST (SEQ ID NO: 260)
FTHRSSVPTTSI (SEQ ID NO: 261)
FTHQSSVSTTST (SEQ ID NO: 262)
FTHQTSAPNTST (SEQ ID NO: 263)
FTHQTFAPNTST (SEQ ID NO: 264)
FTHQNSVPTTST (SEQ ID NO: 265)
FTHQSSMTTTRT (SEQ ID NO: 266)
FTHWIPVPTSST (SEQ ID NO: 267)
FTHWSPIPTTST (SEQ ID NO: 268)
FTHWSSGLTTST (SEQ ID NO: 269)
FHPRSSVPTTST (SEQ ID NO: 270)
FNPRSSVPTTST (SEQ ID NO: 271)
FNPWSSVPTTST (SEQ ID NO: 272)
FTQRSSVPTTSI (SEQ ID NO: 273)
FTQRSSVPTTST (SEQ ID NO: 274)
FTQRSSVPTTSV (SEQ ID NO: 275)
YNEPGLDEPPTT (SEQ ID NO: 276)
YAPQNLSIRGEY (SEQ ID NO: 277)

Exon 5

136 156

PGTSTVDVGTSGTPSSSPSPT (SEQ ID NO: 278)
PGTSTVDLRTSGTPSSLSSPTIM (SEQ ID NO: 279)
PGTSTVDLGTSGTPFSLPSPA (SEQ ID NO: 280)
PGTSTVDLG.SGTPSSLPSPT (SEQ ID NO: 281)
PGTSTVDLG.SGTPSLPSSPT (SEQ ID NO: 282)
PGTSTVDLGTSGTPSSLPSPT (SEQ ID NO: 283)
PGTPTVDLGTSGTPVSKPGPS (SEQ ID NO: 284)
PWTSTVDLGTSGTPSPVPSPT (SEQ ID NO: 285)
PGTSTVYWATTGTPSSFPGHT (SEQ ID NO: 286)
PGTSTVHLATSGTPSSLPGHT (SEQ ID NO: 287)
PGTSTVHLATSGTPSPLPGHT (SEQ ID NO: 288)
PDTSTMHLATSRTPASLSGPT (SEQ ID NO: 289)
PGTSAVHLETSGTPASLPGHT (SEQ ID NO: 290)
PGTSAVHLETTGTPSSFPGHT (SEQ ID NO: 291)
PGTSTVHLGTSETPSSLPRPI (SEQ ID NO: 292)
PGTSIVNLGTSGIPPSLPETT (SEQ ID NO: 293)
PGTFTVQPETSETPSSLPGPT (SEQ ID NO: 294)
PGTPTVDLGTSGTPVSKPGPS (SEQ ID NO: 295)
PGTPTVYLGASKTPASIFGPS (SEQ ID NO: 296)
PKPATTFLPPLSEATT..... (SEQ ID NO: 297)
QINFHIVNWNLSNPDPTSSEY (SEQ ID NO: 298)

Figure 7C

Structure of Amino Terminal Domain
~1325obp
O-Glycosylated Extracellular Amino Terminus
NH2
1
34
1594 1606 1618 1638
Repeat Domain
Exon 1
Exon 2
Exon 3
Exon 4
Exon 5

Figure 8A

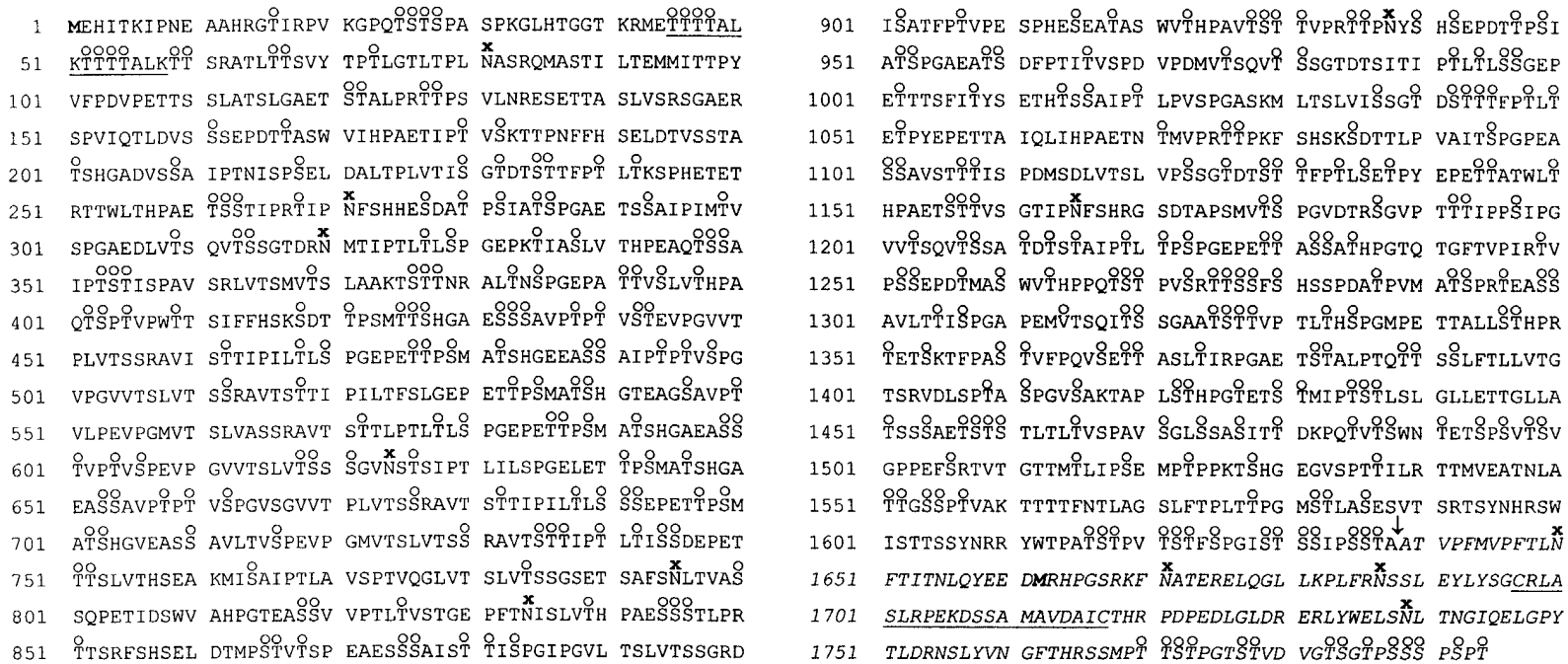

Figure 8B (SEQ ID NO: 299)

Stucture of Carboxy Terminal Domain

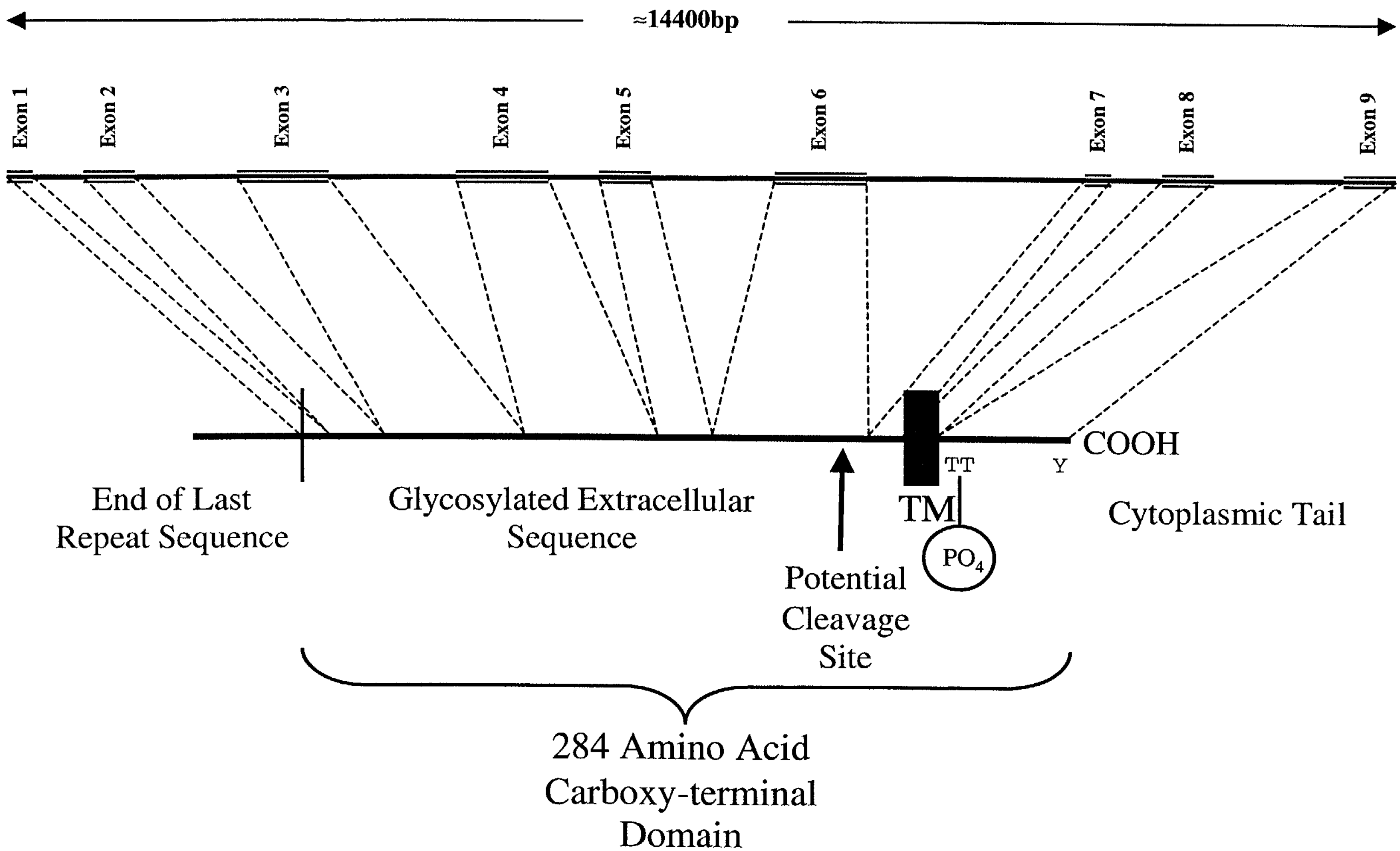

Figure 9A

1 ITLLRDIQDK VTTLYKGSQL HDTFRFCLVT NLTMDSVLVT VKALFSSNLD

Exon 1 — Exon 2

51 PSLVEQVFLD KTLNASFHWL GSTYQLVDIH VTEMESSVYQ PTSSSSTQHF

Exon 3

101 YLNFTITNLP YSQDKAQPGT TNYQRNKRNI EDALNQLFRN SSIKSYFSDC

Exon 4 — Exon 5

151 QVSTFRSVPN RHHTGVDSLC NFSPLARRVD RVAIYEEFLR MTRNGTQLQN

Exon 6

201 FTLDRSSVLV DGYSPNRNEP LTGNSDLPF**W AVILIGLAGL LGLITCLICG**

Exon 7 — Exon 8

251 **VL**VTTRRRKK EGEYNVQQQC PGYYQSHLDL EDLQ

Exon 9

Figure 9B (SEQ ID NO: 300)

Proposed Structure of CA125

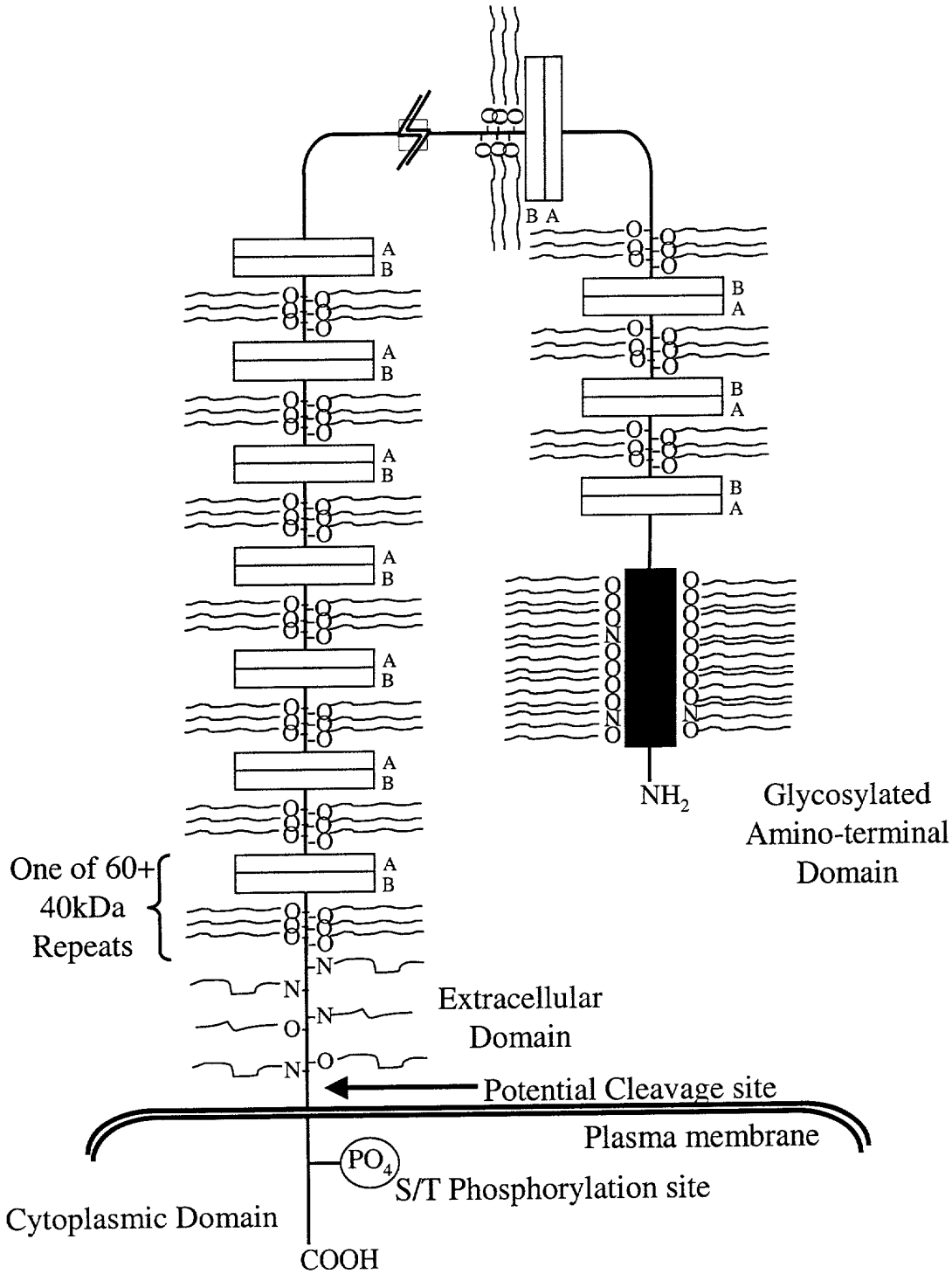

Figure 10